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| 10/009,733 | 05/01/2002 | Jean-Jacques Braconnier | 022701-978 | 6028 |

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EXAMINER

METZMAIER, DANIEL S

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| ART UNIT | PAPER NUMBER |
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1712

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,733

Applicant(s)

BRACONNIER, JEAN-JACQUES

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

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DETAILED ACTION

Claims 1-17 are pending.

Drawings

The drawings were received on October 24, 2003. These drawings are acceptable to the examiner.

Specification

1. The disclosure is objected to because of the following informalities: at page 3, line 15; and page 4, line 14; "LnPO₄" should be La PO₄".

Appropriate correction is required.

Claim Objections

2. Claims 6-10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1, which claims 6 and 7 are dependent, has limited the rare earths to cerium. Claims 6-10 are open to either cerium or lanthanum.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 6-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The last step of claims 6 and 7 set forth "adding at least one salt of said rare earth and said acid". The claims are indefinite as to the metes and bounds of the subject matter sought for patentability. Specifically, there are two different scopes of rare earth set forth, eg., claim 1 limited to cerium and claims 6 or 7 limited to cerium or lanthanum. It is unclear which "said salts" applicants are referring.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber Coatings" (of record). Boakye et al (page 54, lines 10-19, particularly lines 16-19) disclose lanthanum phosphate sols employing nitric acid in addition to the lanthanum phosphate. The pH would have been expected to have been inherent based on the buffering action of the diammonium phosphate. The particle characterization of claim 17 would have been expected to have been inherent as a known characterization of lanthanide phosphate particles. Attention is further directed to Figure 5a of Boakye et al, wherein the coating thickness is less than the applicants' maximum particles limitation.

7. Claims 1-2, 4 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yates, US 3,615,807. Yates (abstract and example 1) discloses the formation of cerium phosphates that are further treated with zirconium oxychloride and methacrylic

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acid. The materials are required to be centrifuged to separate the particles from the aqueous reaction media. The compositions are employed in polyesters and would have been expected to inherently have anti-uv properties in the polyester products, a property known to cerium sols.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber Coatings" (of record).

Boakye et al discloses sols as set forth in the above anticipation rejection.

To the extent the Boakye et al reference differs from claim 16 in the pH, some variation in the pH is within the skill level of one having ordinary skill in the art at the

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time of applicants' invention for the advantage of stabilizing the compositions against solubilization at highly acidic environments and the complete conversion to hydrous oxides in highly alkaline environments.

11. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yates, US 3,615,807. Yates (example 1) discloses the formation of cerium sols as set forth in the above anticipation rejection.

Yates differs from claims 6 and 7 in the explicit disclosure of the pH and the further addition of at least one salt of said rare earth¹ and said acid.

Yates (column 1, lines 48 et seq and 24-25) disclose the precipitation occurs within pH values described and (example 1) employ a acidic pH by employing phosphoric acid to form the phosphate particles. Yates further (column 1, lines 72 and 73) teaches as alternatives to zirconium exemplified, the use of cerium or rare earths. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ more of said rare earths as clearly contemplates in the Yates references. Furthermore, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to vary the pH in the acid region for the advantage of modifying the rate of reaction in forming the phosphates. Merely modifying the process conditions such as temperature and concentration is not a patentable modification absent a showing of criticality for said variable.

12. Claims 1-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber Coatings"

¹ See above rejection under 35 USC 112, second paragraph

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(of record), as applied to claims 14-17 above, and further in view of Hunt et al, US 5,858,465. Boakye et al (page 54, lines 10-19, particularly lines 16-19) disclose lanthanum phosphate sols employing nitric acid in addition to the lanthanum phosphate as set forth in the above anticipation rejection.

Boakye et al differs from claims 1-5 and 12-13 in the disclosure of lanthanum phosphates rather than the claims cerium phosphates.

Hunt et al (column 7, lines 35-55) discloses the use of lanthanum and/or cerium phosphates in fiber coatings and their advantageous anti-corrosion properties and refractory properties.

These references are combinable because they teach lanthanide phosphates. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ cerium phosphate in the compositions of Boakye et al as an obvious functional equivalent to the lanthanum phosphate as clearly recognized in the art in fiber coatings for their advantageous anti-corrosion properties and refractory properties. The similar properties of lanthanum and cerium are well within the ordinary skilled in the art at the time of applicants' invention as is evidenced by their disclosed use together and the known difficulties in separating them.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yates, US 3,615,807, applied to claims 1-2, 4, 6-7 and 13 above, and further in view of Khaladji et al.. 4,942,697. While the foregoing combination of Yates doesn't disclose the use of their sols in or as polishing suspensions, it would have been obvious to one skilled in the art at the time applicant's invention was made to use the sols of Yates, in

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or as polishing suspensions in view of the disclosure of Khaladji et al. (Abstract; column 3, lines 18-32; and Example 6) that suspensions containing rare earth phosphates are effective for polishing.

14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yates, US 3,615,807, as applied to claims 1-2, 4, 6-7 and 13 above, and further in view of Shoji et al. XP-002129788. While the foregoing combination of Yates doesn't disclose the use of their sols in or as anti-corrosion agent compositions, it would further have been obvious to one skilled in the art at the time applicant's invention was made to use the sols of Yates, in or as a convenient vehicle for applying corrosion-inhibiting coatings of La and/or Ce phosphate to metal sheets as disclosed by Shoji et al.

Response to Arguments

15. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

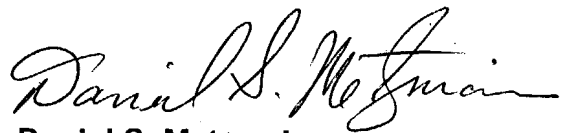
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM